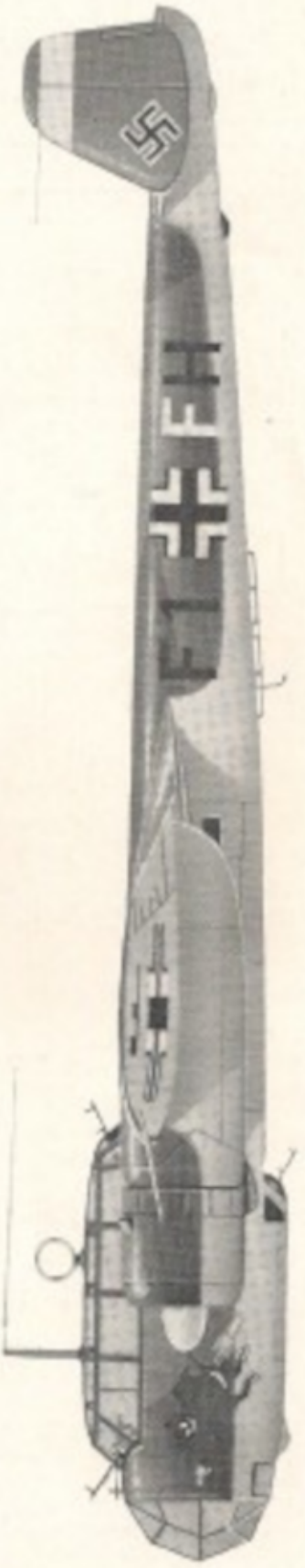
PROFILE PUBLICATIONS

The Dornier Do 17 & 215



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Do 17F-1 of 1 Staffel, Aufklarungsgruppe 22; long-range reconnaissance unit, based at Weiden, Germany, 1938.

7 KG 153.

Do 17E-1 of Staff flight, Kampfgeschwader 153; Germany, summer, 1939.

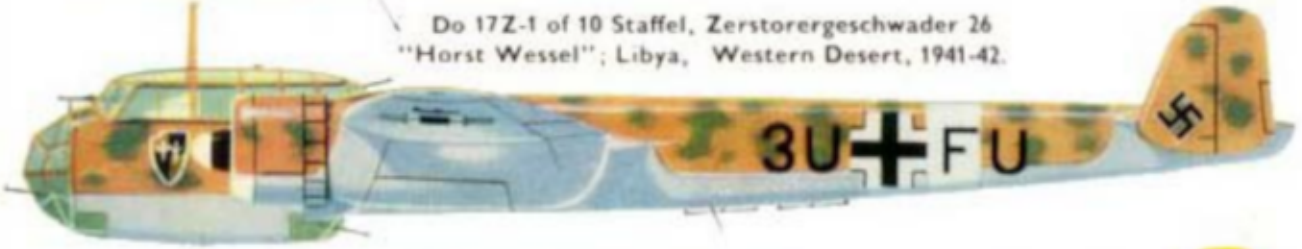
8/KG 153.

Do 17F-1 of 1 Staffel, Aufklarungsgruppe 124; operational over Poland, 1939.

9/KG 153.

Do 17P-1 of Aufklarungstaffel 88; Condor Legion, Spain, 1938.

Do 17Z-1 of 10 Staffel, Zerstorergeschwader 26 "Horst Wessel"; Libya, Western Desert, 1941-42.



ZG 26 "Horst Wessel".

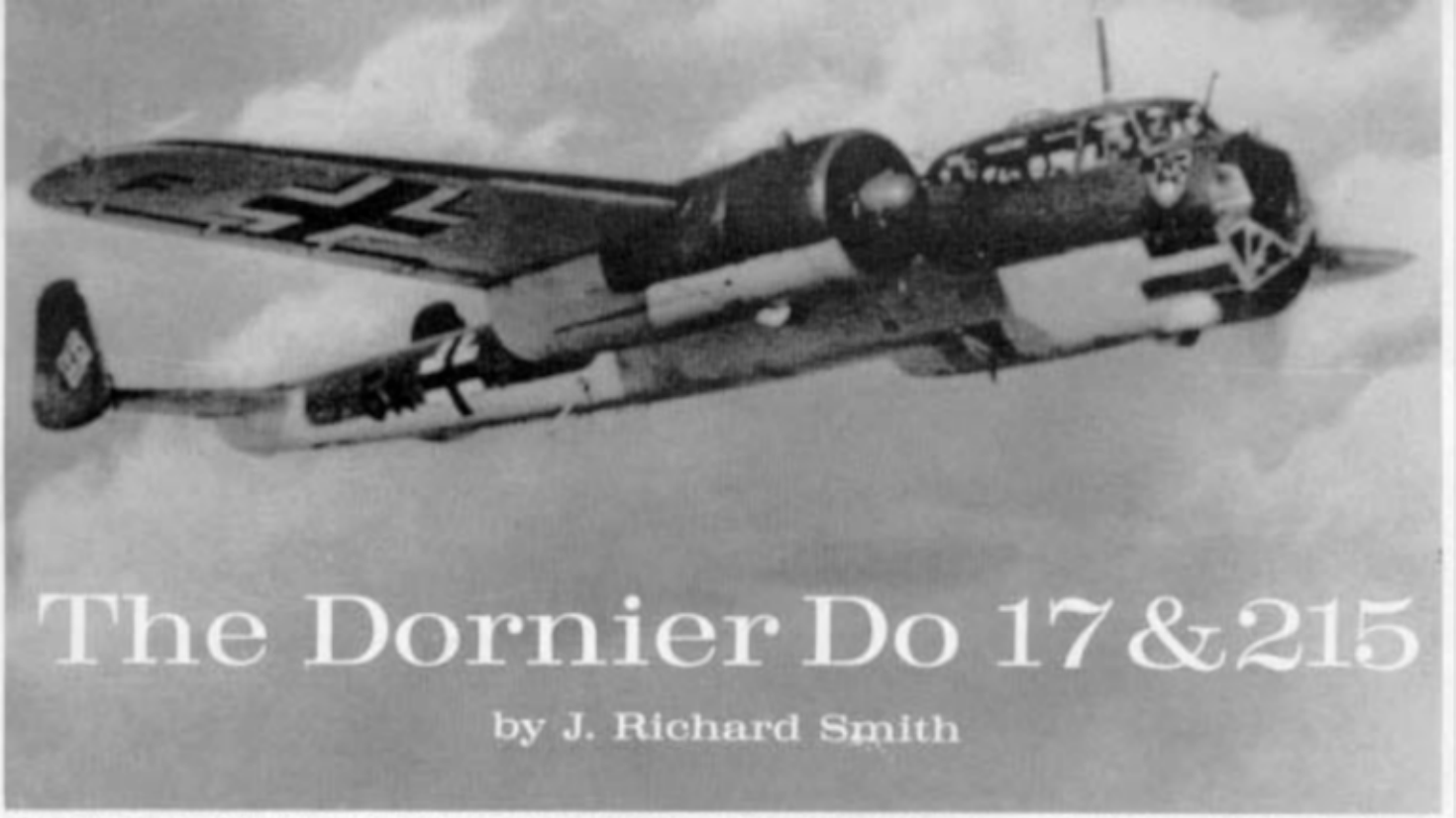
Do 17Z-2 of 3 Staffel, Kampfgeschwader 2 "Holzhammer"; Balkans, 1941.

1 (F) Nacht; (Do 17P).

Do 17Z-2 of 1 Staffel, Kampfgeschwader 2 "Holzhammer"; Balkans, 1941-42.

Do 215B-1 of 3 Staffel, Aufkl.Gr.Ob.d.L.; unit also known as Kommando Rowehl after its commander. Operational from spring 1940 on clandestine reconnaissance of Russian defences.

3/Aufkl.Gr.Ob.d.L.



The Dornier Do 17 & 215

by J. Richard Smith

The major variant of the Dornier Do 17 series was the Do 17Z; the aircraft illustrated here operated with Kampfgeschwader 3 *during the Battle of Britain. The* "Blitz Geschwader" *was re-equipped with the Junkers Ju 88A early in 1941.*

The Dornier 17, although not built in such great numbers as the He 111 and Ju 88 (see *Profiles* Nos. 15 and 29) was one of the most numerous of the bomber types which darkened the clear summer skies of Britain during the fateful summer months of 1940. By the close of 1942 it had all but disappeared from front-line service; but as one of the trio of twin-engined medium bombers with which the *Luftwaffe* launched its lightning conquests in the first two years of the Second World War, the Dornier takes its place in aviation history beside those other weapons of *Blitzkrieg*.

The "Flying Pencil", as this graceful shoulder-wing monoplane was to be dubbed, was originated as early as 1934 as a high-speed mailplane for use by *Deutsche Lufthansa*. It was to be capable of carrying six passengers and was to operate an express European service. The first (unmarked) prototype was flown during the autumn of 1934 and comprised an extremely slim shoulder-wing monoplane with a single fin and rudder. It was powered by two 750 h.p. B.M.W. VI twelve cylinder in-line engines and possessed an exceptional performance. The extreme slimness of its fuselage was to prove its downfall however, as the passengers would have had to perform a series of acrobatics to gain entrance to the two tiny cabins, one forward and one aft of the mainplane. Hence the first prototype, and the Do 17 V2 and V3 which had also been completed, were put into storage at a hangar at Löwenthal.

There in all probability they would have remained but for the resourcefulness of one *Flugkapitän* Untucht, a D.L.H. pilot seconded to the R.L.M. Untucht had gained no less than eight speed records between 14th March and 28th April 1933 when flying the He 70 V2, and was later to be killed when the Ju 90 V2 (D-AIVI) crashed at Bathurst in November 1938. Discovering the three Do 17 prototypes at Löwenthal, Untucht flight tested one of them and put forward a proposal that the machine be converted for use as a high-speed bomber.

The "*Schnellbomber*" concept had long fascinated the R.L.M., so that three further prototypes were ordered. These were fitted with twin fins and rudders to provide a steady bombing platform and the initial prototype, the Do 17 V4, flew first in 1935. The aircraft was similarly powered to the previous models, but length was reduced from 58 ft. 1 in. to 56 ft. 3¼ ins. The Do 17 V5 differed in employing two 770 h.p. Hispano Suiza 12Y engines, but the V6 was

The prototype Do 17V-1; this side-view demonstrates immediately the lines which earned the series the nickname "Flying Pencil". (Photo: Dornier)

A Dornier Do 17E-1 "D-AOTM" in semi-civil markings. The E variant entered service with the Luftwaffe *in the summer of 1937.*

Formations of Dorniers demonstrate the two differing marking styles employed before and after the opening of hostilities.
(Photo: L. I. De A. Reyes)

similarly powered to the V4. The Do 17 V7 had provision for a single 7·9 mm. MG 15 machine gun in a mounting above the fuselage. This and the previous three prototypes were intensively tested in mock combats with contemporary German fighters and the success of the new bomber led the R.L.M. to place a production order.

Tooling up was initiated at the Dornier factories around Friedrichshafen and the first production model Do 17E-1 appeared late in 1936. The Do 17 V9 (D-AHAK), prototype for the E series featured a new glazed nose, could carry a 2,200 lb. bomb load and mounted an armament comprising a movable 7·9 mm. machine gun in the dorsal cupola, an MG 15 firing through the starboard side of the cockpit, and provision for a further floor-mounted MG 15 firing through a ventral hatch. The Do 17E-2 and E-3 were similar to the E-1 and the Do 17F-1, produced contemporaneously with the E series was a photo-reconnaissance aircraft with two floor-mounted Rb 50/18 or Rb 50/30 cameras.

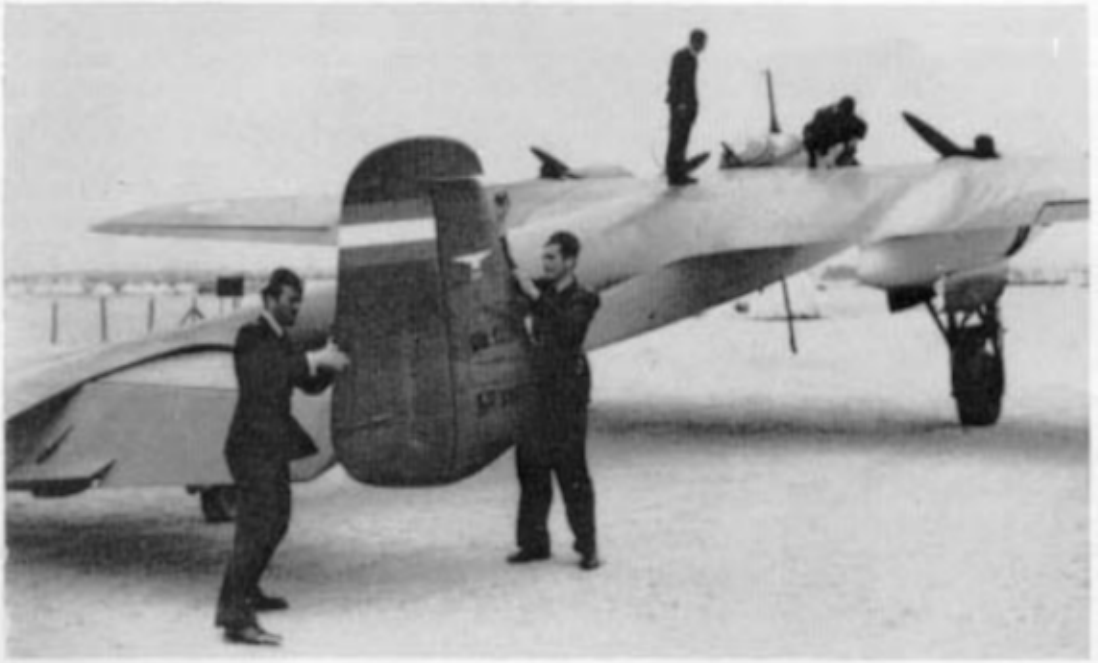
In July 1937, at Dubendorf airfield near Zurich, the Swiss were hosts for the International Military Aircraft Competition. Here, the Do 17 MV1 (alias V8), a specially built high-speed demonstration aircraft powered by two 1,000 h.p. Daimler Benz DB 600A engines achieved 284 m.p.h. showing a clean pair of heels to all other countries' *fighters!* Of course this specially stripped machine was some 50 m.p.h. faster than the standard production Do 17E-1, but it did much to boost sales of German aircraft abroad.

SERVICE, SALES AND DEVELOPMENT

The Do 17E-1 entered service during the middle of 1937 and one of the first units to be equipped with the aircraft was KG 255, the "*Alpen Geschwader*" based at Memmingen. Early in 1938, several Do 17E-1's were sent to Spain for operational trials with a *Staffel* of *Kampfgruppe 88* of the *Condor Legion*. Fifteen Do 17F-1's were also sent to *Aufklarung-staffel 88*. Relying purely on their speed, both variants of the Do 17 were most successful in evading the motley collection of fighters flown by the Republican Air Force.

Following the successful demonstration of the Do 17 MV1, the Yugoslav Government placed an order for a similar aircraft to be powered by two 980 h.p. Gnome-Rhône 14 No. fourteen-cylinder radial engines. The reconnaissance versions were designated Do 17Ka-1 and Ka-2 and the bomber, the Do 17Kb-1. The export version was delivered from October 1937, and licence production was undertaken by the State Aircraft Factory at Kraljevo early in 1940.

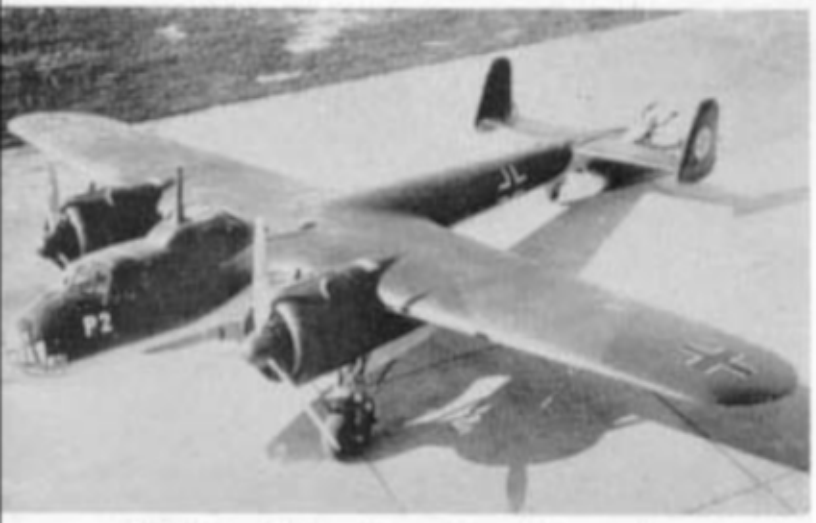
Work was also proceeding on more advanced variants of the Do 17 for use by the *Luftwaffe*. The Do 17 LV1 and LV2 (alternatively known as the V11 and V12) were fitted with twin 900 h.p. Bramo 323A nine cylinder radials, and had provision for a fourth crew member. Maximum speed was increased to 301 m.p.h., but no production of the L-series was



(Left and facing page): *The Yugoslav Government acquired approximately seventy Do 17K's: the original export aircraft were delivered in October 1937 and the State aircraft factory at Kraljevo began licence production early in 1940. When Germany invaded in April 1941, the Dorniers of the Yugoslavian 3rd Bomber Wing were thrown into action and fought until further resistance became impossible.*
(Photos: Imp. War Mus. CM 697, CM 698)

The Do 17MV-1 was a high-speed machine powered by DB 600A engines; it caused something of a sensation at the Zurich Competition of July 1937, achieving a speed of 284 m.p.h.
(Photo: J. W. Caler Collection)

A production Dornier Do 17P-1 and a factory-fresh Do 17P-2.
(Photo: J. W. Caler Collection)



undertaken. The next major service variant was the Do 17M which, although basically similar to the E-1, was fitted with the extra ventral MG 15 machine gun as standard. The Do 17 MV2 and MV3 (alias V13 and V14) were forerunners of the series, which was to include a tropicalised variant, the Do 17M-1/Trop. The Do 17M-1/U1 had provision for an inflatable dinghy in a housing forward of the dorsal gun position.

The Do 17 V15, alternatively designated PV1, was the forerunner of a new production model. This aircraft, which was essentially a reconnaissance version of the M-1 fitted with two 865 h.p. B.M.W. 132N radials, was designated Do 17P-1. The Do 17P-1 carried either an Rb 20/30 and Rb 50/30 or an Rb 20/18 and Rb 50/18 cameras, and the P-1/Trop was fitted with tropical filters and desert survival equipment. The Do 17 RV1 (D-AEEE) with B.M.W. VI and later DB 600 G engines and the RV 2 (D-ATJU) with DB 601 engines were used for trials in connection with various bomb aiming devices.

Experience in Spain with the Do 17 had shown that an increase in defensive armament, particularly for the belly, was most desirable. Accordingly, the forward fuselage was bulged to accommodate a prone gunner with an MG 15 machine gun firing aft. The nose was fully glazed with a series of "beetle eye" panels and more extensive use was made of transparent panels for the pilot's cabin. Designated Do 17S-O, the airframe was identical to the Do 17M apart from the new nose, and appeared first in 1938. The Do 17S-O was powered by two 1,000 h.p. DB 600 A or G engines, but in the event only three pre-production machines were built.

The next production model was the Do 17U pathfinder, essentially similar to the S-series, which carried a second radio operator and extensive radio equipment. Fifteen Do 17U-O and U-1 aircraft were built and delivered to *Luftnachrichten Abteilung 100* (Air Signals Detachment 100) in October 1939. Ln.Abt.100 was redesignated *Kampfgruppe 100* on 18th November 1939 and became famous for leading many night raids, including the destruction of Coventry in November 1940.

THE Do 17Z

The last and most important production model was the Do 17Z which appeared from early 1939 onwards. Essentially similar to the Do 17S-O, the Do 17Z was powered by two Bramo 323A nine cylinder radial engines. The Do 17Z-O pre-production and Z-1 production aircraft were identical, but were soon superseded by the Z-2. This machine was powered

by two 1,000 h.p. Bramo 232P radials with two-stage superchargers. Armament was increased to six 7·9 mm. MG 15 machine guns, one fixed and one movable firing forward, one firing aft in the dorsal position, one firing aft in the ventral position and two mounted in the side windows. Maximum bomb load was still 2,200 lbs. and provision was made for a fifth crew member.

Two Do 17P-1's at Perleberg in 1938. (Photo: via Hans Obert.)

The Do 17Z-3 was a long-range photo-reconnaissance variant with two Rb 20/30 cameras fitted in the entrance door position, twenty-two of these aircraft being produced. The Do 17Z-4 was a dual-control trainer version and the Z-5 was similar but carried special inflatable floatation bags and additional survival equipment.

Following early night bombing attacks by the R.A.F. and the establishment of the *Luftwaffe* night fighter arm, consideration was given to a night fighter version of the Do 17. The nose section of a Do 17Z-3 was replaced by the nose of a Ju 88C-1 fighter. The forward part of the Junkers aircraft was virtually identical in cross-section to that of the Do 17. It contained three 7·9 mm. MG 17 machine guns and one 20 mm. MG FF cannon. The modification was designated Do 17Z-6 "*Kauz I*" (Screech Owl I) but the marriage of the two aircraft was not very successful. Accordingly, a second variant with an entirely new nose was developed. Designated Do 17Z-10 "*Kauz II*", the new machine carried four MG 17 machine guns in the upper part of the nose, with two 20 mm. MG FF cannon contained in the lower part. The breeches of the cannon were positioned in the crew compartment and it was possible to reload them in flight. Rear defence was confined to one 7·9 mm. MG 15 machine gun. The Do 17Z-10 was also fitted with a special infra-red spotlight known as "*Spanner Anlage*". This was used in conjunction with a "*Q-Rohr*" sighting screen and the standard Revi C 12/D gunsight. The "*Spanner Anlage*" was too sensitive, picking up a multitude of other sightings besides that of an enemy bomber, and was soon replaced by an early version of the Lichtenstein SN 2 radar. Only nine Do 17Z-10 night fighters were completed, these being delivered to I./NJG 2 late in 1940. They proved inferior to the unit's major equipment, the Ju 88C, and were soon replaced by the Junkers product.

Two views of aircraft and personnel of 3 (F)/10 "Tannenburg" *in Poland; when the war broke out in September 1939, twenty-three* Luftwaffe *reconnaissance* Staffeln *operated the Do 17 mainly the P variant illustrated here.*
(Photos: via Hans Obert)

THE SECOND WORLD WAR

When the *Luftwaffe* entered the war in September 1939, the following units were equipped with the Do 17:—

7 and 8.(F)/LG 2	3.(F)/10
2, 3 and 4.(F)/11	4.(F)/14
3.(F)/31	1.(F)/120
1, 2, 3 and 4.(F)/121	1, 2 and 3.(F)/122
1, 2 and 3.(F)/123	1.(F)/124
1, 2 and 3.(F)/22	*Stab*, I and II./KG 2
Stab, II and III./KG 3	*Stab*, I and III./KG 76
Stab, I, II and III./KG 77.	

The reconnaissance units were equipped in the main with the Do 17P, and the *Kampfgruppen* with a mixture of Do 17M's and Z's. In addition, the *Stabsketten* of the various *Stukagruppen* were equipped with the Do 17M. The four *Kampfgeschwader* mentioned above played an extensive part in the assault on Poland, often operating virtually as dive bombers in support of the *Wehrmacht*. The majority of strategic bombing was left to the He 111's of KG 1 and KG 4, later joined by KG 27.

On 1st September 1939, I and III./KG 76 and KG 77 were allocated targets in South Western Poland

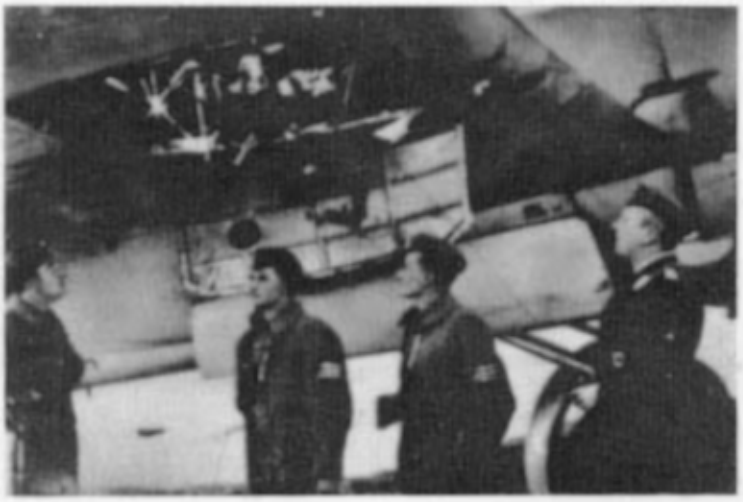
A Do 17P-1 of 3 (F) Staffel, Aufklärungsgruppe 10 *runs up for take-off during the Polish campaign of September 1939.*
(Photo: via Hans Obert)

including Lodz, Radom, Tormaschow, Kielce and Tschenstochau. I and II./KG 2 and II and III./KG 3 under *Luftflotte 1* were allocated targets in the North including Plock, Lida and Biala-Podlaska. KG 77 was later to play a major part in the destruction of Warsaw on 25th September 1939 when, in company with the He 111 units, it carried out a continuous attack on the city.

Apart from a few sporadic reconnaissance operations over the Western Front during the "Phoney War" period, little was seen of the *Luftwaffe* until the assault on Norway and Denmark on 9th April 1940. The only "Flying Pencil" unit to take part in the operations was 1.(F)/120 based at Lubeck/Blankensee equipped with the Do 17P-1. Providing with 1.(F)/122 the only long-range reconnaissance cover for the attacking *Luftwaffe* units, 1.(F)/120 operated from Stavanger/Sola from 10th April.

On 10th May 1940, the *Luftwaffe* launched a full-scale invasion of France and the Low Countries in support of three Army Groups. The Do 17 units (listed in Table II below) struck at Allied communications and airfields, successfully destroying many aircraft before they could get off the ground. Rail communications and *l'Armée de l'Air* bases at Dijon, Lyon. Metz, Nancy and Romilly were heavily damaged and the Dutch and Belgian Air Forces were all but destroyed. A savage bombing attack by KG 54 with He 111's on the city of Rotterdam, and threats of a similar fate for Utrecht, led to the Dutch capitulation on 15th May 1940. By 18th May, *Wehrmacht* forces had reached the Somme and *Luftwaffe* bomber formations were called in to bomb rail communications and prevent Allied reinforcements being brought up.

(Above) *the pilot and front gunner in the cockpit of an early-model Do 17, and* (below) *an officer and three* Luftwaffe Feldwebeln *inspect Polish flak damage sustained by a Dornier.*
(Photos: Witold Liss)



A Do 17Z-2, coded L2+KR, in the "graveyard" at Stavanger-Sola, Norway, in the spring of 1941. The aircraft operated with the long range reconnaissance element of the training unit Lehrgeschwader 2; *this was designated* 7 (F)/LG 2.
(Photo: via Hans Obert)

By the end of May, German forces were nearing the outskirts of Dunkirk from which port the British forces were attempting to evacuate. Despite heavy *Luftwaffe* bombing, evacuation of British forces was completed by 4th June; by the end of the month, France sued for peace.

THE BATTLE OF BRITAIN

Between the end of June and the beginning of July 1940, *Luftwaffe* forces were re-grouped to prepare for the assault on the British Isles. KG 2, KG 3 and I and III./KG 76 remained operational with the Do 17Z and were joined by the newly equipped KGr 606. II./KG 76 and KG 77 had been re-equipped with the Ju 88A-1, but it was not until early in 1941 that the remainder of KG 76 and I and III./KG 3 received the aircraft.

The first phase of the plan of "Operation Sealion" provided for the clearing of the English Channel of British shipping. Oberst Johannes Fink, *Geschwader Kommodore* of KG 2 based at Arras, was created

(*continued on page 10*)

"*You forgot your binoculars!*"; *a Do 17P of the night reconnaissance unit* 1 Staffel (F)/Nacht.

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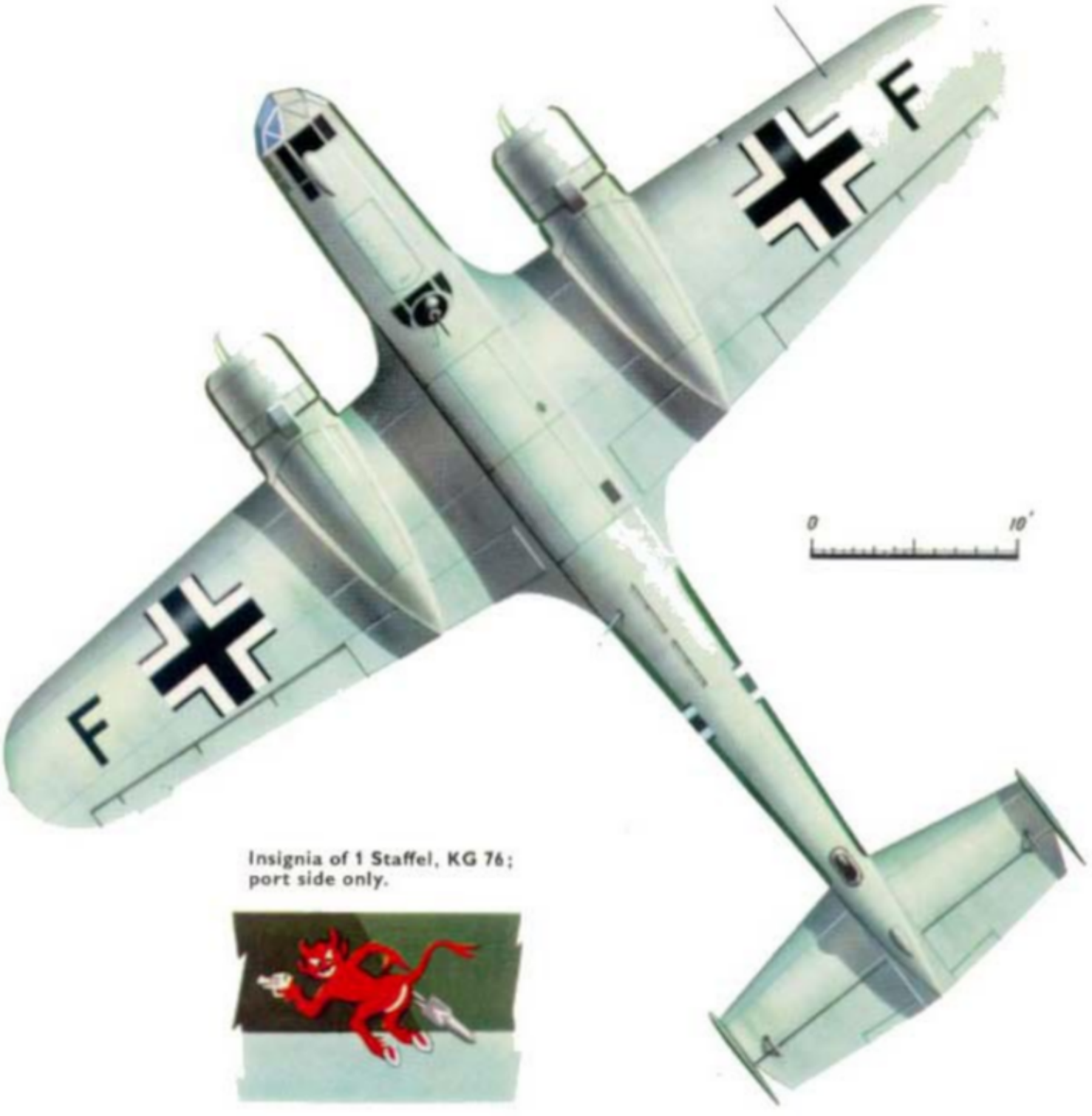
The white bars on fin and upper wing surfaces were temporary identification markings indicating aircraft of I Gruppe.

DORNIER Do 17Z-1 of 1 Staffel, I Gruppe, Kampfgeschwader 76, based at Beauvais-Tille, Northern France, for daylight operations over the British Isles in September 1940.



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Insignia of 1 Staffel, KG 76; port side only.

Do 17Z-2 of 7 Staffel, Kampfgeschwader 3 "Blitz"; Russian Front, winter 1941-42.

Ustachi insignia (Croatia).

Do 17Z-1 of 15 (Croatian) Staffel, Kampfgeschwader 53 "Legion Condor"; Russian Front, winter 1942.

Zvonomir's Cross (Croatia).

Do 17Z-1 of 15 (Croatian) Staffel, Kampfgeschwader 53 "Legion Condor"; Russian Front, 1942.

Do 17F-1 of Croatian Air Force; captured by Yugoslav partisans and flown to R.A.F. Bari, Italy, in 1944.

Croatia.

Do 17Z-2 of Croatian Air Force; Klagenfurt, Austria, 1945.

Do 17Ka of 3rd Bomber Wing, Yugoslav Air Force, 1941.

Yugoslavia.

Do 17Z-2 of Plelv. 46, Finnish Air Force.

Plelv. 46.

Do 17Z-2 of Plelv. 46, Finnish Air Force.

Finland.

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The Do 17P played a part in the Blitzkrieg on Western Europe; a wrecked machine is seen here at Waalhaven in May 1940.
(Photo: via G. J. Zwanenburg)

Kanalkampführer and given responsibility for the task. Besides KG 2, two *Stuka Gruppen* and the fighter units JG 26 and JG 53 were placed under Fink's command. The first shipping attack was made on 10th July 1940 when twenty Do 17Z-2's bombed a convoy near Dover. On 15th July, fifteen KG 2 aircraft attacked a convoy in the Channel, but were intercepted and driven off by No. 56 and No. 151 Squadrons' Hurricanes.

Shipping attacks continued until early in August when the *Luftwaffe* turned its attention to radar installations and coastal airfields. On 12th August KG 2 attacked Manston in Kent, dropping 150 bombs and putting the airfield out of action for a day. Next day two formations, totalling seventy-four Do 17Z's of KG 2 from Cambrai and St. Leger, attacked Eastchurch and Sheerness respectively. The leading formation was led personally by Fink and severely damaged Eastchurch, destroying five Blenheims from No. 35 Squadron. Returning home the formation was attacked by Hurricanes from Nos. 111 and 151 Squadrons, and four Do 17's were shot down and a further four damaged. The rear formation was attacked by No. 74 Squadron's Spitfires over Whitstable and did not reach its target.

During the afternoon of 15th August 1940, the three *Gruppen* of KG 3 under Obst. Wolfgang von Chamier-Glisczinski took off from Antwerp, Deurne and St. Trond to attack airfields and aircraft factories south of the Thames. KG 3, which was heavily

An early production Do 17Z-1. (Photo: J. W. Caler Coll.)

escorted by Bf 109's from JG 26, JG 51, JG 52 and JG 54 penetrated the R.A.F. fighter defences. III./KG 3 under Hptm. Rathmann bombed Eastchurch; the *Stabskette* and II./KG 3 under Hptm. Pilger attacked Rochester. Accurate bombing which destroyed the components store at the Short Brothers factory resulted in extensive delays to production of the new Short Stirling bomber (see *Profile* No. 142).

On 18th August, two Do 17 formations heavily escorted by Bf 109's attacked and severely damaged the airfield at Kenley, destroying four Hurricanes and a Blenheim. About 13.00 hours, II./KG 76 with Ju 88A-1's and 9./KG 76 with Do 17Z-2's attacked Biggin Hill. The plan was for the Ju 88's to attack at high level with the Do 17's coming in at about 100

Fine study of a factory-fresh Do 17Z-0; the Z model appeared early in 1939, and was to see widespread service in the first two years of the war.
(Photo: Dornier)

This is possibly the most well-known photograph of a Dornier destroyed during the Battle of Britain, but it has been captioned variously and inaccurately in the past. In fact, it is the Do 17Z-2 of 9/KG 76 piloted by Oblt. Lamberty which crashed at Biggin Hill at 13.35 hrs. on 18th August, 1940. Lamberty and the Staffelkapitän, *Hptm. Roth, both "rode the plane down" and survived the crash with fairly severe burns. Hptm. Peters and Ofw. Geier both baled out at 150 ft. and were severely injured; Fw. Eberhard climbed out on top of the fuselage and made a successful parachute descent, suffering only minor injuries.* (Photo: Imp. War Mus. HU 3121)

feet. The Ju 88's failed to rendezvous and the Dorniers went in on their own. Two, including the lead aircraft piloted by Oblt. Lamberty with Hptm. Roth (the *Staffelkapitän*) on board, were hit by fighters from Biggin Hill's own Nos. 32 and 610 Squadrons and shot down. Of the remaining seven aircraft in the *Staffel*, two crashed in the Channel (the crews were rescued), three force landed in France, and two landed safely. In one of these latter, the pilot had been killed over Biggin Hill and the aircraft was flown back to Cormeilles-en-Vexin by Ofw. Illg, the flight engineer. He landed the aircraft safely with the wheels down, and was awarded the *Ritterkreuz* for the exploit. A week later Illg was shot down over London and taken prisoner.

On 26th August 1940, a combined force of Do. 17Z-2's from KG 2 and KG 3 crossed the Channel Coast, their targets North Weald and Hornchurch. They were intercepted by no less than ten R.A.F. squadrons, and apart from one *Staffel* which damaged Debden, all were turned back. Five days later a formation of thirty Do 17's from KG 2 damaged Hornchurch, but lost four aircraft. On the last three nights of August, KGr. 606 in company with fourteen other units made a night bombing attack on the Liverpool-Birkenhead area.

On 5th September Do 17's from KG 2 and KG 3, in company with He 111's from KG 26 and KG 53, set the oil tanks at Thameshaven on fire. From 7th September, the *Luftwaffe* turned its attentions to London and during an attempt to bomb the city on the 15th., II./KG 3 lost several aircraft to Hurricanes of No. 504 Squadron.

After the beginning of October, *Luftwaffe* daylight raids began to tail off and Göring transferred his attentions to night attacks.

THE Do 215 VARIANT

Following further interest by foreign countries, particularly Yugoslavia, a Do 17Z-O (D-AIIB) which was used as a demonstration machine was re-designated as the Do 215 V1. The Do 215 V1 was virtually the same aircraft as the Do 17Z, but was intended for export. The Do 215 V2 was again converted from Z-0, but differed in having Gnome-Rhône 14 No. radials. These engines did not offer sufficient increase in performance over the Do 17 K for the Yugoslav Government, so another machine was fitted with two 1,075 h.p. Daimler Benz DB 601 in-lines. This machine had a substantially improved performance and both the Yugoslav and Swedish governments placed orders for the aircraft, now designated Do 215A-1.

Production of the Do 215A-1 export variant began in August 1939, but the machines were taken over by the *Luftwaffe*, and never reached their intended owners. Aircraft on the production line were modified to *Luftwaffe* standards as the Do 215B-O and construction of a production variant, the Do 215B-1, was commenced. The Do 215B-1 was a reconnaissance bomber with provision for a 2,200 lb. bomb load and three cameras. The B-2 was purely

Two Do 17Z's over the Beckton gasworks during a daylight raid on London on 7th September, 1940; the aircraft probably belonged to I Gruppe, KG 76. *Note the temporary application of a white band, indicating* I Gruppe, *to the upper starboard wing-tips; see the five-aspect painting on the centre pages of this* Profile. (Photo: Imp. War Mus. C 5423)

A Dornier Do 17Z of 2 Staffel, KG 2 "Holzhammer" *which crashed at R.A.F. Binbrook in 1941. Note marking style and combat damage.*

a reconnaissance aircraft with no provision for bombs and the B-3 was intended as an export model for Russia. The Do 215B-4 was essentially similar to the B-1, but carried different types of cameras, an Rb 20/30 and Rb 50/30 being fitted.

The first unit to be equipped with the Do 215 was the *Aufklärungsgruppe* of the *Oberbefehlshaber der Luftwaffe*, the three *Staffeln* of which took on hand a small number of aircraft during the spring of 1940. 1.(F)/124, the "*Richthofen Aufklärungstaffel*", was equipped with the machine by May 1940, but no further reconnaissance unit received the type until late in 1941 when the *Nachtaufklärungstaffel* in Russia supplemented its Do 17's with the aircraft. The only other reconnaissance unit to be equipped with the machine (the Do 215 was never used by a bomber unit) was 1.(F)/100 based in Russia.

In 1940 a night fighter conversion of the Do 215B-1 and B-4 was undertaken. Designated the Do 215B-5, the aircraft was essentially similar to the Do 17Z-10, but was powered by the two 1,075 h.p. Daimler Benz DB 601 A engines. Most Do 215B-5's were converted from B-1's and B-4's, the few aircraft so completed being used operationally by I, III and IV./NJG 1 and II./NJG 2.

THE BALKANS AND RUSSIA

By January 1941, only KG 2, III./KG 3 and KGr. 606 of the *Luftwaffe's Kampfgruppen* were equipped with the Do 17. These units were engaged in the night Blitz of 1940/41 which saw attacks on virtually all major cities in the British Isles. Meanwhile, on 6th April 1941, German forces launched a major assault on Greece and Yugoslavia. Supporting the

One of the few Dorniers to reach the African theatre of operations, this Do 17Z of 10/ZG 26 "Horst Wessel" *was captured damaged on Castel Benito airfield in 1941. Note the well-known* Zerstörergeschwader 26 *"runes" insignia on the nose.*
(Photo: Imp. War Mus.)

attacking *Wehrmacht* forces were five bomber *Gruppen*: I, II and III./KG 2 with Do 17Z-2's, III./KG 3 with Do 17Z-2's and II./KG 26 with He 111H's. *Luftwaffe* operations commenced with a heavy attack on Belgrade, and forces were then switched to concentrate on the subjugation of Greece. An unusual situation occured in Yugoslavia where both sides operated the Do 17—the *Luftwaffe* the Z model, and the Yugoslav Air Force the K variant. Approximately seventy Do 17K's equipped the 3rd Bomber Wing, although many were lost in the initial assault. The machines that remained carried out attacks on Sofia and other Bulgarian targets, and attempted to disorganise German troop concentrations. After the capitulation of Yugoslavia on 17th April 1941 the remaining Do 17K's, except those which escaped to Egypt, were transferred to the German-backed Croatian Air Force.

German forces soon overwhelmed the small but courageous Greek Armies together with the small contingent of British troops in the country, and by 27th April, Athens was occupied. Now only Crete remained in the way of German domination of the Balkans and measures were put in hand to capture the island. Code-named "Operation Mercury", the plan involved an airborne assault by no less than 530 Ju 52/3m's and 100 DFS 230 gliders. Initial softening-up attacks were carried out against strongpoints on the island and the British Fleet by Do 17Z's from KG 2, He 111H's from II./KG 26 and Ju 87B's from St.G 2 (see *Profile* No. 76). The operation proved a brilliant, ifextremely costly, success.

Even before the completion of the operations against Crete, *Luftwaffe* forces were being withdrawn from the Balkans and from France for the assault on Russia. The famous "Operation Barbarossa", an attack by three Army Groups and four Air Fleets, was planned to commence at 03.00 hours on Sunday 22nd June 1941. Previous to the attack, a detailed reconnaissance of Russian defences had been carried out by the clandestine *Kommando Rowehl* (alias *Aufkl.Gr.Ob.d.L.*) equipped with a mixture of Do 215B-2's and He 111's. It operated in conjunction with the special research *Staffel* of the D.V.L.—equipped with the Ju 88B-O and Ju 86P-2 high altitude reconnaissance aircraft.

The Do 17 still equipped KG 2, III./KG 3, 2.(F)/11 and the *Nachtaufklärungstaffeln* at the time of the invasion, but by August 1941 the machine had all but disappeared from front line service. The most famous Do 17 unit, *Kampfgeschwader 2*, was withdrawn to the Western Front late in July 1941 and by the end of August had almost completely re-equipped with the new Do 217E.

The last operational "Flying Pencil" units were the three *Nachtaufklärungstaffeln* based in Russia and equipped with a small number of Do 17's and Do 215's until early in 1943. One other unit, 15.(Croatian) *Staffel* of KG 53 was operational with the Do 17Z until late in 1942.

(Top of page and Right): *The Do 17Z's of* KG 2 *played a large part in the German operations over the Balkans in the spring of 1941. Note the characteristic diagonal nose-band carried by machines of that unit. The spires and "onion" dome in the background suggest that the top photo was taken in Bulgaria.*

(Top photo: via R. Ward)

The 15th Staffel *of* KG 53 *was manned by Croatian Air Force personnel; note the Ustachi insignia on the nose of this snow-camouflaged Do 17Z during winter operations in Russia.*

TABLE I—Do 17 Strength on 2nd December 1939

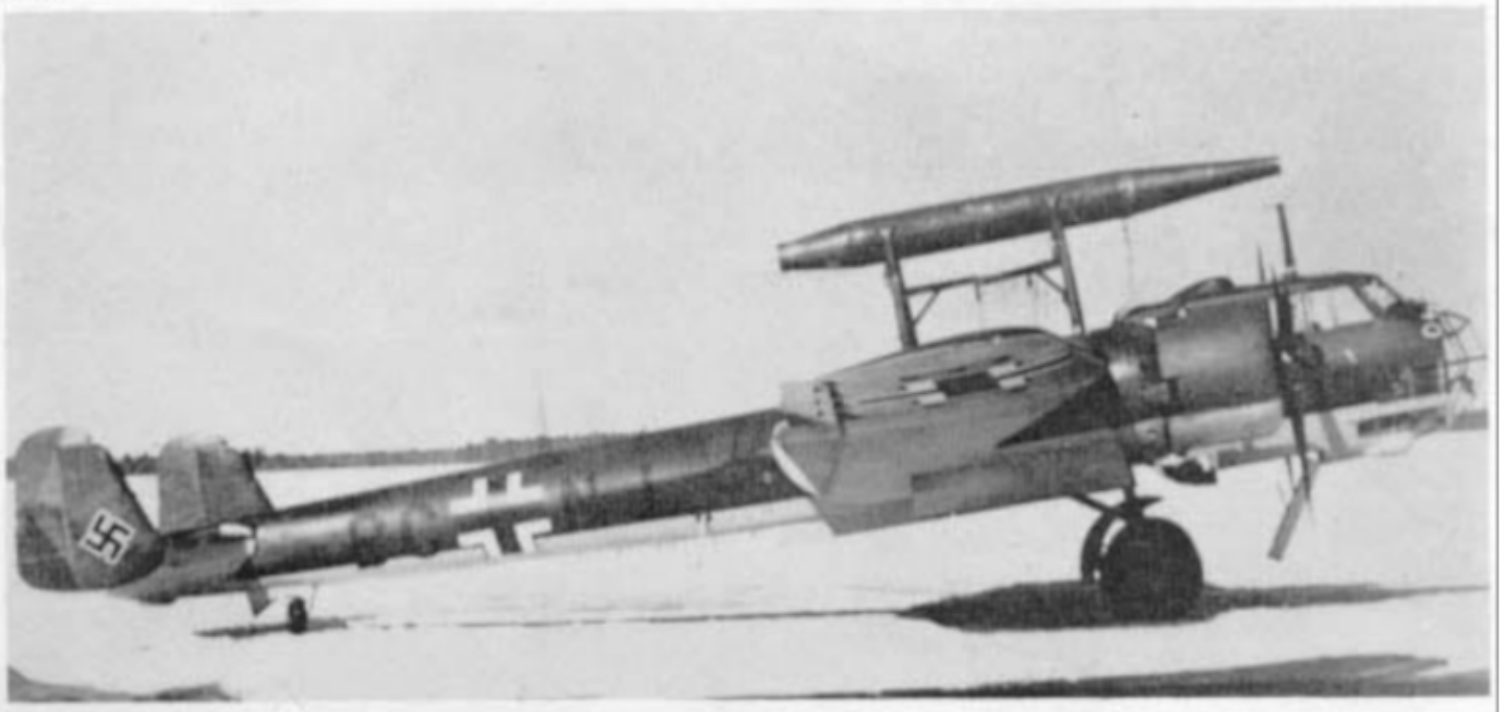
Long-range reconnaissance	Do 17F-1	12	(8)
	Do 17P-1	75	(54)
	*Do 17RV1 & RV2	2	(2)
	*Do 17S-O	3	(3)
	Do 17Z-3	6	(5)
Bomber units	Do 17Z-1 & Z-2	346	(265)
Dive bomber units	Do 17M-1	10	(2)
	Do 17P-1	8	(7)
Close-range reconnaissance	Do 17M-1	28	(26)

**It is extremely doubtful that these aircraft were in fact operational. Most probably they were included because they were on the strength of a* Luftwaffe *experimental establishment.*

TABLE II—Do 17 and Do 215 Strength on 11th May 1940

7.(F)Staffel/LG2	Do 17M	7	(7)	Do 17P	12	(10)
3.(F)Staffel/10	Do 17M	4	(4)	Do 17P	13	(8)
2.(F)Staffel/11	Do 17P	12	(10)			
3.(F)Staffel/11	Do 17P	10	(10)	Bf 110	2	(2)
4.(F)Staffel/11	Do 17P	12	(7)	Bf 110	1	(1)
4.(F)Staffel/14	Do 17M	5	(4)	Do 17P	12	(10)
1.(F)Staffel/22	Do 17P	12	(9)			
2.(F)Staffel/22	Do 17M	6	(6)	Do 17P	11	(10)
3.(F)Staffel/22	Do 17M	7	(5)	Do 17P	11	(10)
3.(F)Staffel/31	Do 17M	4	(2)	Do 17P	12	(9)
4.(F)Staffel/121	Do 17P	9	(6)	Ju 88	3	(2)

Developed to the designs of Dr. Eugen Sänger, this supersonic ramjet was flight-tested at subsonic speeds on a Do 17Z test-bed during 1941.



A formation of Do 17Z's of the Holzhammer Geschwader *during operations in the East. By this stage in its career the Dornier often carried one or two additional beam guns in the centre cockpit windows.* (Photo: R. Ward Coll.)

5.(F)Staffel/122	Do 17P	11	(8)			
1.(F)Staffel/123	Do 17P	7	(7)	Ju 88	3	(3)
2.(F)Staffel/123	Do 17P	9	(8)			
3.(F)Staffel/123	Do 17P	9	(6)	Ju 88	3	(3)
1.(F)Staffel/124	Do 215	9	(3)			
1 Staffel/Aufkl.Gr.Ob.d.L.	Do 215	3	(1)	Bf 110	2	(2)
	He 111	7	(4)			
2 Staffel/Aufkl.Gr.Ob.d.L.	Do 215	10	(6)			
Aufkl.Staffel z.b.V.	Do 17M	5	(4)	He 111	2	(1)
Stab, I, II and III./KG 2	Do 17Z	98	(68)			
Stab, I, II and III./KG 3	Do 17Z	105	(89)			
Stab/KG 28	Do 17M	3	(2)			
Stab, I, II and III./KG 76	Do 17Z	106	(85)			
Stab, I, II and III./KG 77	Do 17Z	113	(96)			

(In the above lists, the first figure refers to the number of aircraft on hand, the second—in parentheses—to the number serviceable).

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A Dornier Do 17Z-2 operational with PLe.Lv.46, a Finnish Air Force bomber squadron. (Photo: Christopher Shores)

SPECIFICATIONS

Dornier Do 17E-1

Dimensions: Span 59 ft. 0⅛ ins. Length 53 ft. 3½ ins. Height 14 ft. 2 ins. Wing area 592 sq. ft.

Power plants: Two 750 h.p. B.M.W. VI 7·3 twelve-cylinder liquid-cooled in-line engines.

Armament: Two or three 7·9 mm. MG 15 machine guns. (During 1939/40, several aircraft were fitted with up to five MG 15's). Bomb load 2,200 lbs.

Weights: Empty 9,920 lbs. Loaded 14,991 lbs. Maximum loaded 15,520 lbs.

Performance: Maximum speed 236 m.p.h. at sea level. Maximum diving speed 342 m.p.h. Landing speed 68 m.p.h. Service ceiling 18,050 ft. Normal range 990 miles with a 1,760 lb. bomb load.

Dornier Do 17Z-2

Dimensions: Span 59 ft. 0⅛ ins. Length 52 ft. 0 ins. Height 14 ft. 11½ ins. Wing area 592 sq. ft.

Power plants: Two 1,000 h.p. Bramo 323 P nine-cylinder air-cooled radial engines.

Armament: Four to eight 7·9 mm. MG 15 machine guns. Bomb load 2,200 lbs.

Weights: Empty 11,484 lbs. Loaded 18,832 lbs. Maximum loaded 19,481 lbs.

Performance: Maximum speed 265 m.p.h. at 16,400 ft. Cruising speed 240 m.p.h. at 14,200 ft. Normal range 745 miles. Maximum range (with auxiliary fuselage tanks) 1,860 miles. Service ceiling 26,400 ft.

Dornier Do 215B-1

Dimensions: Span 59 ft. 0⅛ ins. Length 52 ft. 0 ins. Height 14 ft. 11½ ins. Wing area 592 sq. ft.

Power plants: Two 1,075 h.p. Daimler Benz DB 601 A twelve-cylinder liquid-cooled in-line engines.

Armament: Four 7·9 mm. MG 15 machine guns. Bomb load 2,200 lbs., plus three cameras.

Weights: Empty 10,449 lbs. Loaded 20,282 lbs.

Performance: Maximum speed 292 m.p.h. at 16,400 ft. Maximum cruising speed 257 m.p.h. Initial climb rate 1,195 ft./min. Normal range 965 miles. Service ceiling 31,170 ft.

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